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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,511	10/14/2003	Todd M. Steinmetz	GP-304140	3530

7590 09/11/2006

Leslie Hodges
General Motors Corporation
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Detroit, MI 48265-3000

EXAMINER

ARTHUR JEANGLAUD, GERTRUDE

ART UNIT	PAPER NUMBER
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3661

DATE MAILED: 09/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/686,511	STEINMETZ ET AL.	
	Examiner	Art Unit	
	Gertrude Arthur-Jeanglaude	3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xiaolan (U.S. Pub No. 20040043856) in view of O'Neil et al. (U.S. Patent No. 6,506,140).

As to claims 1, 7, 12-17, 20-25, Xiaolan discloses Speed control for a multi-mode, electro-mechanical transmission including an input member coupled to a prime mover, at least one planetary gear set, at least one motor, at least one torque transfer device (See abstract), a plurality of operating states and an output member (See paragraph 0007, 0008, 0020, 0040, 0042-0043). Furthermore, Xiaolan discloses applying torque to the transmission in accordance with values for controlled external torques (See paragraph 0015). Though Xiaolan discloses all, it fails to specifically disclose an open loop motor torque controller operative to control a preselected transmission speed to a target speed as a predetermined function of preselected transmission torques and accelerations. In an analogous art, O'Neil et al. disclose an open loop motor torque controller operative to control a preselected transmission speed to a target speed as a predetermined function of preselected transmission torques and

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accelerations (See column 7, lines 59-64). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Xiaolan with that of O'Neil et al. by having an open loop motor torque controller operative to control a preselected transmission speed to a target speed as a predetermined function of preselected transmission torques and accelerations in order to minimize potentially degrading effects of transmission gear lash on drivability.

As to claims 2, 8-9, 18-19, 26-27, O'Neil et al. disclose at least one closed loop effort operative to act upon a predetermined transmission speed error (See col. 7, lines 64-67).

As to claims 3-6, 10-11, O'Neil et al. disclose the plurality of operating states includes a first state effective to operatively couple the input to the output through a first gear set, a second state effective to operatively couple the input to the output through a second gear set, a third state effective to operatively decouple the output from the transmission, and further wherein when one of the first and second states is operative the preselected transmission member torques comprise input member torque and output member torque, and the preselected transmission accelerations comprise input member acceleration and output member acceleration (See col. 5, lines 15-35 different operating states) (See col. 2, lines 23-67 the different operating gears).

Response to Arguments

Applicant's arguments with respect to claims 1-27 have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gertrude Arthur-Jeanglaude whose telephone number is (571) 272-6954. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

gaj


GERTRUDE A. JEANGLAUDE
PRIMARY EXAMINER